

## WHAT IS CLAIMED IS:

1. A text editing device comprising:

character information storage means for storing a character string as text data;

5 character size storage means for storing size of each character included in the character string stored in the character information storage means;

frame configuration storage means for storing a configuration of a frame in which the character string stored in the character information storage means is displayed or printed;

operation mode setting means for setting an operation mode, specifying status of  
10 displaying or printing of the character string stored in the character information storage means in the frame when editing operation is executed, to operation modes including at least a frame configuration fixed state and a frame configuration alterable state;

character size alteration means for altering memory contents of the character size  
storage means so that the character string stored in the character information storage means  
15 will fit in the frame in cases where the operation mode setting means has set the operation mode to the frame configuration fixed state; and

frame configuration alteration means for altering memory contents of the frame  
configuration storage means so that the character string stored in the character information  
storage means will fit in the frame in cases where the operation mode setting means has set  
20 the operation mode to the frame configuration alterable state.

2. The text editing device according to claim 1, wherein the character size alteration means includes:

size comparison means which compares size of the whole character string when a  
25 newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means with size of the frame determined by the frame configuration stored in the frame configuration storage means each time when a character string is stored in the character information storage means in the case where the operation mode has been set to the frame configuration fixed state by the operation mode setting means;  
30 and

judgment means which judges whether the size of the whole character string when the newly inputted character string is additionally displayed or printed in the character size

stored in the character size storage means fits in the frame or not based on the comparison by the size comparison means,

wherein when the judgment means judges that the size of the whole character string does not fit in the frame, the character size alteration means alters the memory contents of the character size storage means so that the size of each character of the character string including the newly inputted character string will be reduced to a size within a range allowing the character string stored in the character information storage means to fit in the frame.

3. The text editing device according to claim 2, wherein:

the frame configuration storage means stores width of the frame as the size of the frame, and

the size comparison means compares length of the whole character string when the newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means in a column-increasing direction with the width of the frame stored in the frame configuration storage means each time when a character string is stored in the character information storage means.

4. The text editing device according to claim 2, wherein:

the frame configuration storage means stores height of the frame as the size of the frame, and

the size comparison means compares length of the whole character string when the newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means in a line-increasing direction with the height of the frame stored in the frame configuration storage means each time when a character string is stored in the character information storage means.

5. The text editing device according to claim 1, wherein the character size alteration means alters the memory contents of the character size storage means so that the character string stored in the character information storage means will fit in the frame also in cases where the frame configuration stored in the frame configuration storage means is altered and at the same time the operation mode is changed from the frame configuration alterable state to the frame configuration fixed state by the operation mode setting means.

6. The text editing device according to claim 1, wherein when the operation mode has been set to the frame configuration fixed state and character sizes of characters of different sizes have been stored in the character size storage means, the character size alteration means  
5 alters the memory contents of the character size storage means so that the character string stored in the character information storage means will fit in the frame while maintaining size ratios among the different character sizes stored in the character size storage means.

7. The text editing device according to claim 1, further comprising line feed position  
10 storage means for storing line feed position information to be used for displaying or printing the character string stored in the character information storage means while starting new lines at intended positions,

wherein the character size alteration means alters the memory contents of the character size storage means so that the whole character string stored in the character  
15 information storage means will fit in the frame also in cases where the operation mode has been set to the frame configuration fixed state and the line feed position information has been stored in the line feed position storage means.

8. The text editing device according to claim 1, wherein the text editing device is  
20 configured as a label writer.

9. The text editing device according to claim 1, wherein the editing operation includes text input operation and line feed operation.

10. The text editing device according to claim 1, further comprising operation mode  
25 display control means for displaying a screen image, indicating a change in text display status at the point when the editing operation is executed, depending on the operation mode set by the operation mode setting means.

11. The text editing device according to claim 10, wherein the operation mode display  
30 control means indicates text display statuses before and after the editing operation by displaying images corresponding to the frame depending on the operation mode set by the

operation mode setting means.

12. The text editing device according to claim 1, wherein the operation mode setting means can set the operation mode to a frame height variable operation mode for displaying or printing the character string stored in the character information storage means to fit in the frame in a state where the frame configuration stored in the frame configuration storage means is alterable only in a frame height direction which is a line-increasing/decreasing direction when the editing operation is executed, as an operation mode included in the frame configuration alterable state.

13. The text editing device according to claim 1, wherein the operation mode setting means can set the operation mode to a frame width variable operation mode for displaying or printing the character string stored in the character information storage means to fit in the frame in a state where the frame configuration stored in the frame configuration storage means is alterable only in a frame width direction which is a column-increasing/decreasing direction when the editing operation is executed, as an operation mode included in the frame configuration alterable state.

14. The text editing device according to claim 1, wherein the operation mode setting means can set the operation mode to a two-direction variable operation mode for displaying or printing the character string stored in the character information storage means to fit in the frame in a state where the frame configuration stored in the frame configuration storage means is alterable both in a line-increasing/decreasing direction and in a column-increasing/decreasing direction when the editing operation is executed, as an operation mode included in the frame configuration alterable state.

15. The text editing device according to claim 1, wherein the operation mode setting means makes an initial setting of the operation mode depending on a print medium on which the character string stored in the character information storage means will be printed.

16. The text editing device according to claim 15, wherein the operation mode setting means initially sets the operation mode to the frame configuration fixed state when the print

medium on which the character string stored in the character information storage means will be printed is a tape-like print medium and size of a print area of the tape-like print medium in its longitudinal direction is preset.

17. The text editing device according to claim 13, wherein the operation mode setting means initially sets the operation mode to the frame width variable operation mode when the print medium on which the character string stored in the character information storage means will be printed is a tape-like print medium and size of a print area of the tape-like print medium in its longitudinal direction is not preset.

18. The text editing device according to claim 12, wherein the operation mode setting means initially sets the operation mode to the frame height variable operation mode when the print medium on which the character string stored in the character information storage means will be printed is a print medium having size in the line-increasing/decreasing direction larger than size in a column-increasing/decreasing direction.

19. The text editing device according to claim 1, wherein the operation mode setting means sets the operation mode to the frame configuration fixed state when the frame is newly inputted.

20. A program that causes a computer to function as:

character information storage means for storing a character string as text data;

character size storage means for storing size of each character included in the character string stored in the character information storage means;

frame configuration storage means for storing a configuration of a frame in which the character string stored in the character information storage means is displayed or printed;

operation mode setting means for setting an operation mode, specifying status of displaying or printing of the character string stored in the character information storage means in the frame when editing operation is executed, to operation modes including at least a frame configuration fixed state and a frame configuration alterable state;

character size alteration means for altering memory contents of the character size storage means so that the character string stored in the character information storage means

will fit in the frame in cases where the operation mode setting means has set the operation mode to the frame configuration fixed state; and

frame configuration alteration means for altering memory contents of the frame configuration storage means so that the character string stored in the character information storage means will fit in the frame in cases where the operation mode setting means has set the operation mode to the frame configuration alterable state.

21. The program according to claim 20, wherein the character size alteration means includes:

size comparison means which compares size of the whole character string when a newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means with size of the frame determined by the frame configuration stored in the frame configuration storage means each time when a character string is stored in the character information storage means in the case where the operation mode has been set to the frame configuration fixed state by the operation mode setting means; and

judgment means which judges whether the size of the whole character string when the newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means fits in the frame or not based on the comparison by the size comparison means,

wherein when the judgment means judges that the size of the whole character string does not fit in the frame, the character size alteration means alters the memory contents of the character size storage means so that the size of each character of the character string including the newly inputted character string will be reduced to a size within a range allowing the character string stored in the character information storage means to fit in the frame.

22. The program according to claim 21, wherein:

the frame configuration storage means stores height of the frame as the size of the frame, and

the size comparison means compares length of the whole character string when the newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means in a line-increasing direction with the height of the frame

stored in the frame configuration storage means each time when a character string is stored in the character information storage means.

23. The program according to claim 21, wherein:

5 the frame configuration storage means stores width of the frame as the size of the frame, and

the size comparison means compares length of the whole character string when the newly inputted character string is additionally displayed or printed in the character size stored in the character size storage means in a column-increasing direction with the width of the frame stored in the frame configuration storage means each time when a character string is stored in the character information storage means.

24. The program according to claim 20, wherein the character size alteration means alters the memory contents of the character size storage means so that the character string stored in the character information storage means will fit in the frame also in cases where the frame configuration stored in the frame configuration storage means is altered and at the same time the operation mode is changed from the frame configuration alterable state to the frame configuration fixed state by the operation mode setting means.

25. The program according to claim 20, wherein when the operation mode has been set to the frame configuration fixed state and character sizes of characters of different sizes have been stored in the character size storage means, the character size alteration means alters the memory contents of the character size storage means so that the character string stored in the character information storage means will fit in the frame while maintaining size ratios among the different character sizes stored in the character size storage means.

26. The program according to claim 20, the program further causes the computer to function as line feed position storage means for storing line feed position information to be used for displaying or printing the character string stored in the character information storage means while starting new lines at intended positions,

wherein the character size alteration means alters the memory contents of the character size storage means so that the whole character string stored in the character

information storage means will fit in the frame also in cases where the operation mode has been set to the frame configuration fixed state and the line feed position information has been stored in the line feed position storage means.

5     27.     The program according to claim 20, the program further causes the computer to function as operation mode display control means for displaying a screen image, indicating a change in text display status at the point when the editing operation is executed, depending on the operation mode set by the operation mode setting means.

10    28.     The program according to claim 27, wherein the operation mode display control means indicates text display statuses before and after the editing operation by displaying images corresponding to the frame depending on the operation mode set by the operation mode setting means.

15    29.     The program according to claim 20, wherein the operation mode setting means can set the operation mode to a frame height variable operation mode for displaying or printing the character string stored in the character information storage means to fit in the frame in a state where the frame configuration stored in the frame configuration storage means is alterable only in a frame height direction which is a line-increasing/decreasing direction when  
20    the editing operation is executed, as an operation mode included in the frame configuration alterable state.

30.     The program according to claim 20, wherein the operation mode setting means can set the operation mode to a frame width variable operation mode for displaying or printing the  
25    character string stored in the character information storage means to fit in the frame in a state where the frame configuration stored in the frame configuration storage means is alterable only in a frame width direction which is a column-increasing/decreasing direction when the editing operation is executed, as an operation mode included in the frame configuration alterable state.

30    31.     The program according to claim 20, wherein the operation mode setting means can set the operation mode to a two-direction variable operation mode for displaying or printing



the character string stored in the character information storage means to fit in the frame in a state where the frame configuration stored in the frame configuration storage means is alterable both in a line-increasing/decreasing direction and in a column-increasing/decreasing direction when the editing operation is executed, as an operation mode included in the frame configuration alterable state.

32. The program according to claim 20, wherein the operation mode setting means makes an initial setting of the operation mode depending on a print medium on which the character string stored in the character information storage means will be printed.

33. The program according to claim 20, wherein the operation mode setting means initially sets the operation mode to the frame configuration fixed state when the print medium on which the character string stored in the character information storage means will be printed is a tape-like print medium and size of a print area of the tape-like print medium in its longitudinal direction is preset.

34. The program according to claim 30, wherein the operation mode setting means initially sets the operation mode to the frame width variable operation mode when the print medium on which the character string stored in the character information storage means will be printed is a tape-like print medium and size of a print area of the tape-like print medium in its longitudinal direction is not preset.

35. The program according to claim 29, wherein the operation mode setting means initially sets the operation mode to the frame height variable operation mode when the print medium on which the character string stored in the character information storage means will be printed is a print medium having size in the line-increasing/decreasing direction larger than size in a column-increasing/decreasing direction.

36. The program according to claim 20, wherein the operation mode setting means sets the operation mode to the frame configuration fixed state when the frame is newly inputted.